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PLATE VI.

Hypertragulus calcaratus Cope, skull, natural size ; from the lower Miocene. Fig. 1, lower jaw from above, of specimen from White River bed of Colorado. Fig. 2, skull from John Day series of Oregon ; *a*, side, *b*, from above, *c*, from below.

PLATE VII.

Bos taurus, dentition, two-thirds natural size ; from Cuvier.

EDITOR'S TABLE.

EDITORS E. D. COPE, AND J. S. KINGSLEY.

The position of the Post-Darwinians is clearly set forth in an abstract of a lecture delivered by Prof. E. Ray Lankester, at the London Institution, which appears in *Nature* of February, 28th. Prof. Lankester declares that the error of Lamarck (and consequently of the Neolamarckians,) consists in the assumption that acquired characters can be inherited. He says, "Congenital variation is an admitted and demonstrable fact; transmission of congenital variations is also an admitted and demonstrable fact. Change of structure acquired during life—as stated by Lamarck—is also a fact, though very limited. But the transmission of these latter changes to offspring is not proved experimentally ; all experiment tends to prove that they cannot be transmitted." Two inferences may be derived from these statements. First ; the author of them does not believe that the so-called congenital variations can be or have been acquired ; second ; that he has no hypothesis to offer in explanation of the origin of congenital variations. These positions exclude another inference which nevertheless may be derived from other propositions embraced in the abstract of the lecture. He says, with Lamarck, that "change of structure acquired during life is also a fact," and also that "all plants and animals produce offspring which resemble their parents on the whole." But in spite of these statements we are to believe that if a plant or animal acquires a useful addition to or mortification of its structure during life, this is the particular variation which will *not* be transmitted. Since the modifications acquired by use during life are necessarily useful, it seems that according to the Post-Darwinians, the only way of acquiring useful variations known to us, is excluded from the process of Organic evolution. To say the least of it, the doctrine of probabilities is severely taxed by such a position as this.

But we say further, with Professor Cunningham, that were this hypothesis true, there should have been no evolution. If acquisition during life-time, is to render a character non transmissible, the continued growth of a single character by accretions during successive generations through geological ages could not and ought not to occur. Each generation should begin where its ancestors began in the matter of useful characters, or those acquired by use, so that there could be no accumulation or development of such characters. The influence of the environment, as well as that of the energies of the living being, would be incompetent to develop more in a given generation than that generation could acquire in its single life-time. How then can evolution account for the law so beautifully disdisplayed by paleontology, of the gradual modification of parts through long geological ages, towards given ideals of mechanical perfection? How can we account for the gradual perfecting of the articulations of the internal and external skeletons of forms which possess them? Not only is no explanation offered the Post-Darwinian school, but such progress is under their hypothesis, impossible. It is an explanation of *obscurus per obscurius.* But we are still of the opinion, in spite of Weissman's theory to the contrary, that so long as the germ plasma is subject to nutrition, it is subject to influences occuring during the adult life of an animal, and it would be an exception to all the other tissues were it not so.—*E. D. C.*

A graceful tribute to the memory of Priestly, was recently paid by the first Unitarian Church of Philadelphia. A tablet surmounted by a bust was placed on the interior wall of the church, and services in honor of the philospher, in which several scientific men took part, were held at the time of the unveiling. Priestly was not only one of the fathers of modern chemistry; it was also as a philosopher and theologian, and as one of the founders of the first Unitarian Church of Philadelphia, that he was honored on this occasion. Though this act of appreciation has come too late for him to enjoy, it will encourage others to contribute their share to the progress of mankind.

RECENT LITERATURE.

LANG'S COMPARATIVE ANATOMY.[1]—This is the beginning of an entirely new edition of Schmidt's Comparative Anatomy, and so far as one may judge from a single part, it is to be ranked among the best of the recent text books. On every page there is a freshness both in treatment and illustration which is pleasing, while the text reads almost like a story. There is one noticeable feature in the work; it is logical in its arrangement. Thus we have as an introduction a couple of pages of an account of the cell followed by twenty on the Protozoa; next the student is introduced to the egg and spermatozoan, cell complexes and tissues, a few words concerning the Metazoa, and with this preparation we are lead to the Cœlenterates and thence to the higher forms. Several features, which though not exactly new, we do not recall in any text book, are introduced into the classification, and are usually to be regarded as improvements. Thus the division of the Cnidaria (—Cœlenterata *s. str*) into Hydozoa, Scyphozoa and Ctenophora and the limitation of the first two of these by the character of the œsophagus (ento, or ectodermal) is a valuable feature, though it disarranges our preexisting ideas and transfers the Craspedota from the Hydrozoa to the neighborhood of the sea anemones and corals. So too the separation of the Plathelmintha from the Vermes is *certainly* to be warranted on morphological grounds. The present part of the work considers only the Protozoa, Cœlenterata, Plathelmintha, and Vermes, but if

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[1] Lehrbuch du vergleichenden Anatomie, von Dr. Arnold Lang. Erste abtheilung, June, 1888, pp. 290.